

TWO NEW SPECIES OF *POMADERRIS* Labill. (RHAMNACEAE) FROM NEW SOUTH WALES.

by

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ABSTRACT

Walsh, N. G. Two new species of *Pomaderris* Labill. (Rhamnaceae) from New South Wales. *Muelleria* 7(2): 207-212 (1990).—*P. parrisiae* and *P. cocoparrana* from southern New South Wales are illustrated and described as new species. Their distribution, ecology and relationships to other species of *Pomaderris* are briefly discussed.

INTRODUCTION

This is the third recent paper by the present author describing new taxa in *Pomaderris*, toward a general review of the genus. The other articles appeared in *Muelleria* 6:6 and 7:1 (1988 and 1989 respectively).

TAXONOMY

Pomaderris parrisiae N. G. Walsh, *sp. nov.*

Species nova P. andromedifolia A. Cunn. affinis, a qua foliis majoribus, extremis ambabus acutibus, pilis subter foliis sparsioribus, et inflorescentibus laxioribus et latioribus differt.

TYPUS: New South Wales—South Coast, 0.6 km N of Pipers Lookout (Snowy Mountains Highway) along track to Rutherford Weir, 36° 35' S, 149° 27' E, alt. 820 m a.s.l., 18.x.1987, *M. Parris* 9217 (HOLOTYPUS MEL 693093; ISOTYPI BRI, CBG, HO, NSW.).

Shrub to small, slender tree, to 9 m high. *Branchlets* and petioles covered by short, appressed, silvery hairs. *Lamina* elliptic to lanceolate, (2-)4-8 cm × (6-)10-25 mm, acute at base and apex; margins flat or slightly recurved; penninerved with 8-18 (mostly c. 12) pairs of lateral veins, secondary veins not apparent; upper surface green, entirely glabrous; lower surface silvery, closely covered with a fine stellate indumentum overlain, but not obscured by, short (c. 0.5 mm), appressed, simple hairs. *Stipules* lanceolate c. 5 mm long, keeled, early deciduous. *Inflorescence* mostly loosely paniculate, hemispherical to corymbose, 3-8 cm diam. *Pedicels* c. 5 mm long. *Sepals* oblong, acute, 2.5-3 mm long, spreading or recurved at anthesis, covered externally with a fine stellate tomentum which is largely obscured by a layer of longer silky, simple hairs, glabrous and creamy yellow on the inner surface. *Petals* ovate to deltoid with crenulate margins, narrowed at the base to a claw which is slightly shorter than the blade, the whole slightly shorter than the sepals, and pale yellow. *Staminal filaments* c. 2 mm long; anthers oblong, c. 1.5 mm long. *Style* c. 2 mm long, divided to about midway into 3 spreading arms. *Capsule* broadly ellipsoid, c. 4 mm long. *Seed* flattened ellipsoid-obloid, pale brown c. 2.5 × 1.5 mm, including the pale apical aril c. 0.5 mm long. (Fig. 1)

OTHER SPECIMENS EXAMINED:

New South Wales—From type locality—18.xi.1987, *M. Parris* 9216 (MEL 112564, CANB, CBG, NSW); 20.ix.1987, *J. D. Briggs* 2263, 2264 (MEL 1556040, MEL 1556041 resp., CANB, CBG, HO, NSW); 11.ix.1988, *N. G. Walsh* 2404 (MEL 1564744, CANB, NSW). *Southern Tablelands*—Brown Mountain, 7.x.1959, *E. Gauba* (CBG 016140); Wadbilliga National Park, Wadbilliga Fire Trail, 5.3 km SW from Wadbilliga R. crossing, 36° 17'30" S, 149° 34'10" E, alt. 900 m, 9.i.1987, *J. D. Briggs* 2186 & *M. Parris* (MEL 687157, BRI, CANB, CBG, NSW); Conways Gap, NE of Kybean, 36° 16'

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Fig. 1. *Pomaderris parrisiae* a—flowering twig, $\times 1$. b—leaf undersurface, $\times 1$; insert, $\times 4$. c—flower, $\times 8$. a–c from the holotype.

S, $149^{\circ} 33' E$, alt. 900 m, 11.xi.1980, *I. R. Telford* 8566 (MEL 684712, CBG); Tantawangelo State Forest, Weir Track into Willbob Ck, 13 km SW of Bemboka, 4.xi.1983, *A. Nunnink* 559 (MEL 672077, NSW); Glenbog State Forest, Old Dam Road, 29.vii.1981, *D. Binns* 259 (NSW). South Coast—Coolangubra State Forest, southern escarpment of Big Jack Mountain, overlooking Stockyard Ck, $36^{\circ} 53' S$, $149^{\circ} 27' E$, alt. 800 m, 21.x.1986, *D. E. Albrecht* 2923 (MEL 689174, CBG, NSW); Ben Boyd National Park, along Green Cape Rd, 10.xii.1976, *A. Slee & M. Holgate* (MEL 687167, CANB); Egan Peaks Nature Reserve, Rock outcrop on the W. side, 1.5 km NW of Burragate Peak, $37^{\circ} 00' 30'' S$, $149^{\circ} 49' 00'' E$, alt. 560 m, 17.x.1986, *J. D. Briggs* 2084 (MEL 688147, CANB, CBG, NSW).

DISTRIBUTION AND CONSERVATION STATUS:

Most specimens are from the escarpment country falling from the eastern edge of the southern tablelands to the south coast area in the Kybean-Bemboka area, with a few southern outliers at lower altitudes.

The conservation status of the species is assessed to be 3VC- (Briggs & Leigh 1989, as *Pomaderris* sp. 3), that is, the species is vulnerable over a geographic range more than 100 km, is represented in a conservation reserve, but the total population size is not known. The conservation status of the species may require revision should areas currently supporting the species and contained within the NSW Woodchip Agreement Area (e.g. Tantawangelo, Glenbog and Coolangubra State Forests), be harvested for woodchips prior to a detailed assessment of the species total abundance and distribution.

HABITAT:

Specimens from the escarpment area are invariably associated with tall open-forests dominated by *Eucalyptus fastigata*, *E. smithii*, *E. cypellocarpa* or *E. nitens*, in some cases with elements of wetter forest types tending to cool-temperate rain-forest (with e.g. *Atherosperma moschatum*, *Elaeocarpus holopetalus*, *Tasmannia lanceolata*). Soils, where noted by collectors, are skeletal, overlaying granite or sediments. Specimens from southern localities (i.e. *Albrecht 2923*, *Slee & Holgate s.n.*, *Briggs 2084*) appear to be from drier sites with shrubby or "dry sclerophyll" vegetation. Two of these collections are atypical, *Albrecht 2923* having small (to 5 cm) leaves and *Briggs 2084* having more compact inflorescences with deeper yellow flowers and a strikingly erect habit. These two specimens are for the present tentatively placed with *P. parrisiae*.

NOTES:

Specimens of *P. parrisiae* have in the past been referred to *P. andromedifolia* and *P. nitidula*. From *P. andromedifolia*, it can be distinguished by its generally larger leaves which are distinctly acute at both the base and apex, the indumentum of the abaxial leaf surface (which in *P. andromedifolia* is of a fine layer of stellate hairs more or less completely obscured by appressed, silky, golden hairs), and the larger and looser panicles. *P. nitidula*, a species of far northern N.S.W. and southern Queensland, bears a strong resemblance to *P. parrisiae* and is undoubtedly closely allied to it, but differs most significantly in having a dense, silky layer of white to pale golden hairs covering the undersurfaces of the leaves, with the lateral nerves immersed within and not protruding above this hair layer.

The specific epithet honours Mrs Margaret Parris of Merimbula who has been an avid and skilled collector and observer of plants in the N.S.W. south-coast area, and who first brought this taxon to my attention.

Pomaderris cocoparrana* N. G. Walsh *sp. nov.

Species nova ab aliis speciebus generibus foliis relative brevibus, latus, cum pube simplice minuto pagina supera, et floreibus apetalis differt.

TYPUS: New South Wales—South Western Plains, Cocopara (sic) Range, summit of Mt Binga (=Bingar), alt. 1480 ft (c. 450 m) a.s.l., 28.ix.1969, *J. H. Willis s.n.* (HOLOTYPE MEL 503274; ISOTYPE NSW.)

Spreading shrub to 2 m high. *Petioles* and young branchlets bearing shortly spreading, golden to rusty stellate and simple hairs. *Lamina* broad-ovate, orbicular or broad-obovate, mostly 1–2.5 cm × 8–18 mm, obtuse (rarely acute) to slightly emarginate at apex; margins flat; penninerved with 5–12 (mostly c. 8) pairs of lateral veins, secondary veins not apparent; upper surface velvety, covered with extremely short (<0.1 mm), erect simple hairs; lower surface densely covered by fine, pale greyish stellate hairs, with some appressed, rusty simple hairs over the midrib and lateral veins. *Stipules* lanceolate c. 8 mm long, keeled, early deciduous. *Inflorescence*

paniculate, more or less pyramidal, comprising several sub-globular clusters, each commonly c. 1 cm diam, the whole inflorescence usually 2–4 cm diam. *Pedicels* 1.5–3 mm long. *Sepals* oblong, acute, c. 2 mm long, spreading at anthesis, covered externally with a fine stellate tomentum overlain by longer silky, simple hairs, which are produced beyond the apex as a small tuft, glabrous and pale golden-yellow on the inner surface. *Petals* absent. *Staminal filaments* c. 2 mm long; *anthers* oblong, c. 1.2 mm long. *Style* c. 1.5 mm long, divided for about 2/3 of its length into 3 spreading arms. *Capsule* ellipsoid, c. 4 mm long. *Seed* brown, flattened ellipsoid, angled along midline on ventral face, c. 2 × 1 mm, including the pale apical aril c. 0.5 mm long. (Fig. 2)

OTHER SPECIMENS EXAMINED:

New South Wales—from type locality—13.xi.1978, *G. M. Cunningham 5505* & *P. L. Milthorpe* (MEL 1536519, NSW); 15.xi.1978, *G. M. Cunningham 5649* & *P. L. Milthorpe* (MEL 1536520, NSW.); 16.xi.1988, *N. G. Walsh 2232* (MEL, CBG, NSW); Cocoparra Range, S end, north scarps of Mt Caley, 2.x.1969, *J. H. Willis s.n.* (MEL 91871); Duncans Ck, Cocoparra National Park, c. 30 km NE of Griffith, 34° 07' S, 146° 12' E, 20.ix.1978, *J. G. Brickhill 24* (MEL 1536509, NSW); Store Dam Ck, Cocoparra Range, xi.1970, *E. Atkinson* (NSW 216574); Near Kangaroo Falls, Cocoparra Range, x.1970, *E. Atkinson* (NSW 216575).

DISTRIBUTION AND CONSERVATION STATUS:

The species is known only from the summit area of Mt Bingar, the highest point on the Cocoparra Range; Duncans Ck which drains Mt Bingar to the west (where rare); and slopes of Mt Caley about 9 km SE of Mt Bingar. It is likely to occur in similar sites at high elevations to the north and south of Mt Bingar but has not yet been located in these areas.

The conservation status of the species is assessed to be 2RCat, that is, the species has a geographic range of less than 100 km, is rare, has a total population exceeding 1000 individuals, and the entire population is included in a conservation reserve. This species was not recognized by Briggs and Leigh (1989), herbarium specimens to date having been included with *P. andromedifolia*.

HABITAT:

P. cocoparrana has been observed chiefly in shrubland or shrubby woodland formation, in rocky sites and on shallow soils derived from sandstone (or on deeper colluvium at Duncans Ck). Associated species include *Eucalyptus macrorhyncha*, *E. melliodora*, *E. sideroxylon*, *Callitris endlicheri*, *Calytrix tetragona*, *Dodonaea viscosa*, *Grevillea floribunda*, *Olearia tenuifolia*, *Persoonia curvifolia*. A population on the sheltered south-eastern slopes of Mt Caley observed in November 1988 consisted of a few plants germinated from seed following severe bushfires in 1986/87. No plants were located on the exposed 'north scarps of Mt Caley' the locality given on *Willis s.n.* (MEL 91871) and it is possible that this population has now succumbed to successive fires.

NOTES:

The affinities of *P. cocoparrana* have been suggested to be most closely with the widespread *P. andromedifolia*, a species which it slightly resembles in having appressed, silky hairs overlaying the fine stellate indumentum along the nerves on the lower surface of the leaves, but from which it is readily distinguished in the relatively broad and blunt leaves which are minutely pubescent on the upper surface and the apetalous flowers. *P. cinerea* and *P. brogoensis*, two species of restricted occurrence in the south-coast area of New South Wales, share the latter two characters with *P. cocoparrana* but are readily separable from it in having minute stellate (*c.f.* simple) pubescence on the surfaces of the upper leaves, and in the field, an overall dull or grey-green aspect. The geographic isolation from known occurrences of any other species of *Pomaderris* is of interest. Its occurrence at the Cocoparra Range probably represents the most inland penetration of any species in the genus.



Fig. 2. *Pomaderris cocoparrana* a—flowering twig, $\times 1$. b—flower, $\times 7$. c—leaf undersurface, $\times 10$. d—leaf T.S., $\times 20$. e—dehiscent capsule, $\times 7$. a-d from holotype; e from *Cunningham 5505 & Milthorpe* (MEL 1536519).

ACKNOWLEDGEMENTS

It is a pleasure to acknowledge the kind cooperation of Mrs Margaret Parris of Merimbula whose diligent collecting in the south-coast area of New South Wales has unearthed several botanical novelties, my colleague Anita Barley for providing illustrations of the new species, and the staff of CBG and NSW who forwarded *Pomaderris* specimens from those institutions.

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- Briggs, J. D. & Leigh, J. H. (1989). Rare or threatened Australian plants 1988 revised edition. (Special Publ. 14. Austral. Natl Parks & Wildlife Ser.: Canberra.)

Manuscript received 5 June 1989